

Claims

1. A fabric comprising:

a substrate layer;

an adhesive layer disposed on one surface of the substrate layer; and

5 at least one layer of pile attached to and extending from the adhesive layer,

the pile layer having an embossed pattern thereon, the embossed pattern including a plurality of visually discernable regions having generally elongate shapes with longitudinal axes of the shapes being oriented substantially along a first direction,

10 the pile layer further having a printed pattern superimposed upon the embossed pattern, the printed pattern including a plurality of visible features having generally elongate shapes with longitudinal axes of the shapes being oriented substantially along the first direction.

2. The fabric as in claim 1, wherein the printed pattern is characterized by a scene or
15 illustration, and wherein the embossed pattern imparts a three-dimensional texture to the scene or illustration, the texture imparting a visual effect to the scene or illustration which renders it more realistic than the scene or illustration without the superimposed embossed pattern.

20 3. The fabric as in claim 2, wherein the scene or illustration represents a sylvan setting.

4. The fabric as in claim 3, wherein the scene or illustration is dominated by a component selected from at least one of the group comprising trees, branches, bushes, leaves, flowers, berries, grass, rocks, and moss.

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5. The fabric as in claim 4, wherein the fabric is a camouflage fabric.

6. The fabric as in claim 4, wherein the embossed pattern simulates a bark-like appearance.

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7. The fabric as in claim 2, wherein the visually discernable regions of the embossed pattern comprise depressions in a surface of the pile layer.

8. The fabric as in claim 7, wherein the embossed pattern is formed by air embossing the pile layer.

5 9. The fabric as in claim 1, wherein the visually discernable regions of the embossed pattern and the visible features of the printed pattern are essentially randomly positioned with respect to each other.

10. The fabric as in claim 1, wherein the plurality of visually discernable regions of the embossed pattern are substantially non-uniform in length and width.

10 11. The fabric as in claim 1, wherein the printed pattern is formed by a heat transfer printing process.

15 12. The fabric as in claim 7, wherein a color and shading of the portions of the printed pattern superimposed on the depressions visually differs from a color and shading of essentially equivalent portions of the printed pattern that are not superimposed on the depressions, thus yielding an enhanced visual representation of color and texture of the scene or illustration.

20 13. A fabric comprising:
a substrate layer;
an adhesive layer disposed on one surface of the substrate layer; and
at least one layer of pile attached to and extending from the adhesive layer,
the pile layer having superimposed thereupon an embossed pattern and a printed
25 pattern, the printed pattern characterized by a scene or illustration, wherein the embossed pattern imparts a three-dimensional texture to the scene or illustration, the texture imparting a visual effect to the scene or illustration which renders it more realistic than the scene or illustration without the superimposed embossed pattern.

30 14. The fabric as in claim 13, wherein the embossed pattern includes a plurality of visually discernable regions having generally elongate shapes with longitudinal axes of the shapes being oriented substantially along a first direction.

5 16. The fabric as in claim 13, wherein the scene or illustration represents a sylvan setting.

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~~19. The fabric as in claim 17, wherein the embossed pattern simulates a bark-like appearance.~~

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21. The fabric as in claim 13, wherein the embossed pattern is formed by air embossing
20 the pile layer.

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25. The fabric as in claim 20, wherein a color and shading of the portions of the printed pattern superimposed on the depressions visually differs from a color and shading of

essentially equivalent portions of the printed pattern that are not superimposed on the depressions, thus yielding an enhanced visual representation of color and texture of the scene or illustration.

5 26. An camouflage fabric comprising:

a layer of air-textured pile having printed thereon an illustration of a sylvan setting dominated by a component selected from at least one of the group comprising trees, branches, bushes, leaves, flowers, berries, grass, rocks, and moss, and wherein the texturing comprises a random overlay on the illustration of depressions that are non-uniform in length and width.

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Sub A3 27. ~~The fabric as in claim 26, wherein the texturing simulates a bark-like appearance.~~

28. A method comprising:

15 embossing a pile fabric to form an embossed pattern thereon, the embossed pattern including a plurality of visually discernable regions having generally elongate shapes with longitudinal axes of the shapes being oriented substantially along a first direction; and printing the fabric with a printed pattern, the printed pattern including a plurality of visible features having generally elongate shapes with longitudinal axes of the shapes being oriented substantially along the first direction.

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29. The method as in claim 28, wherein the embossing step is performed prior to the printing step.

30. The method as in claim 28, wherein the plurality of visually discernable regions of the
25 embossed pattern are substantially non-uniform in length and width.

31. The method as in claim 28, wherein the embossing step comprises:
passing the pile fabric under a rotating air embossing cylinder;
applying a flow of pressurized air to an internal surface of the air embossing cylinder;

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flowing the air through a plurality of apertures in the cylinder and impinging the air on a surface of the pile fabric adjacent to the cylinder to form the visually discernable regions.

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32. The method as in claim 31, wherein in the flowing step the air flows through apertures in the cylinder that have a shape and orientation substantially similar to a shape and orientation of the visually discernable regions.

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33. The method as in claim 31, wherein in the flowing step the visually discernable regions formed by impinging the air on the surface of the pile fabric adjacent to the cylinder comprise depressions in the surface of the pile fabric.

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34. The method as in claim 32, wherein the air flows through apertures in the cylinder having a generally elongate shape, with a longitudinal direction of the apertures being oriented substantial co-directional with a direction perpendicular to a longitudinal axis of the cylinder.

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35. The method as in claim 32, wherein the air flows through apertures in the cylinder having a generally elongate shape, with a longitudinal direction of the apertures being oriented substantial co-directional with a direction parallel to a longitudinal axis of the cylinder.

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36. The method as in claim 31, wherein during the passing step, an adhesive to which a pile layer of the pile fabric is adhered is uncured while impinging the air upon the surface of the pile fabric.

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37. The method as in claim 36, further comprising after the embossing step and prior to the printing step, the step comprising:
curing the adhesive by exposing the pile fabric to a source of radiation.

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38. The method as in claim 37, wherein in the curing step the pile fabric is exposed to a source of heat.

39. The method as in claim 29, wherein the printing step comprises:

bringing a surface of the pile fabric, which surface comprising an embossed pile layer of the fabric, into contact with a surface of a sheet of transfer paper, which surface having a printed pattern thereon; and

applying heat and pressure to the pile fabric and the transfer paper; and

5 transferring the printed pattern from the transfer paper to the embossed pile layer.

40. The method as in claim 39, wherein the printed pattern transferred to the pile fabric during the transferring step is characterized by a scene or illustration.

10 41. The method as in claim 40, wherein the scene or illustration represents a sylvan setting.

42. The method as in claim 41, wherein the scene or illustration is dominated by a component selected from at least one of the group comprising trees, branches, bushes, leaves,
15 flowers, berries, grass, rocks, and moss.

43. The method as in claim 42, wherein the embossed pattern simulates a bark-like appearance.

20 44. The method as in claim 40, wherein during the bringing step the embossed pattern and the scene or illustration on the transfer paper are juxtaposed and oriented with respect to each other such that after transferring the scene or illustration from the transfer paper to the embossed pile layer during the transferring step, the embossed pattern imparts a three-dimensional texture to the scene or illustration transferred to the pile fabric, the texture
25 imparting a visual effect to the scene or illustration which renders it more realistic than the scene or illustration without the embossed pattern.

45. The method of claim 39, wherein during the bringing step the embossed pattern and the printed pattern on the transfer paper are juxtaposed and oriented with respect to each
30 other such that after transferring the printed pattern from the transfer paper to the embossed pile layer during the transferring step, the visually discernable regions of the embossed pattern and the visible features of the printed pattern transferred to the embossed pile layer are essentially randomly positioned with respect to each other.

46. A method comprising:
embossing a pile fabric to form an embossed pattern thereon;
printing the fabric with a printed pattern, the printed pattern characterized by a scene
5 or illustration; and

orienting and superimposing the embossed pattern and the printed pattern such that
the embossed pattern imparts a three-dimensional texture to the scene or illustration, the
texture imparting a visual effect to the scene or illustration which renders it more realistic
than the scene or illustration without the superimposed embossed pattern.

10 47. A camouflage fabric produced by a method comprising:
air embossing a pile fabric to form an air embossed pattern thereon, the air embossed
pattern including a plurality of visually discernable regions having generally elongate shapes
with longitudinal axes of the shapes being oriented substantially along a first direction; and
15 printing the fabric with a printed pattern, the printed pattern depicting an illustration
of a sylvan setting that includes a plurality of visible features having generally elongate
shapes with longitudinal axes of the shapes being oriented substantially along the first
direction.

20 48. A camouflage fabric produced by a method comprising:
air embossing a pile fabric to form an air embossed pattern thereon;
printing the fabric with a printed pattern, the printed pattern characterized by a scene
or illustration of a sylvan setting; and
orienting and superimposing the embossed pattern and the printed pattern during the
25 printing step such that the embossed pattern imparts a three-dimensional texture to the sylvan
setting, the texture imparting a visual effect to the sylvan setting which renders it more
realistic than the sylvan setting without the superimposed embossed pattern.

30 49. A fabric comprising:
a substrate layer;
an adhesive layer disposed on one surface of the substrate layer; and
at least one layer of pile attached to and extending from the adhesive layer,

the pile layer having superimposed thereupon an embossed pattern and a printed pattern, the printed pattern characterized by a scene or illustration, wherein the embossed pattern imparts a three-dimensional texture to the scene or illustration, characterized by a color and shading of the portions of the printed pattern superimposed on depressions of the embossed pattern visually differing from a color and shading of essentially equivalent portions of the printed pattern that are not superimposed on the depressions, thus yielding an enhanced visual representation of color and texture of the scene or illustration.

50. The fabric as in claim 49, wherein the printed pattern is characterized by a scene or illustration representing a sylvan setting.

51. The fabric as in claim 50, wherein the fabric is a camouflage fabric.

52. The fabric as in claim 49, wherein the depressions of the embossed and visually discernable features of the printed pattern are essentially randomly positioned with respect to each other.

53. A camouflage fabric comprising:

a layer of embossed pile having printed thereon a scene, illustration or pattern selected to visually blend into a surrounding environment in which the fabric is to be utilized, wherein the fabric is embossed with a texturing pattern that comprises an overlay on the scene, illustration or pattern of depressions that are shaped and oriented so as to create an embossed texture decreasing the degree of visual contrast between the camouflage fabric and the surrounding environment in which the fabric is to be utilized over that of the an equivalent camouflage fabric except without the embossed texture.

54. The camouflage fabric as in claim 53, wherein the texturing pattern comprises an essentially random overlay of depressions on the printed scene, illustration or pattern.

55. The camouflage fabric as in claim 53, wherein the fabric is air embossed to form the embossed texture.

56. The camouflage fabric as in claim 53, wherein the embossed pile has printed thereon an illustration of a sylvan setting dominated by a component selected from the group consisting of trees, branches, bushes, leaves, flowers, berries, grass, rocks, moss, and combinations thereof.

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57. The camouflage fabric as in claim 53, wherein the depressions are non-uniform in length and width.

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